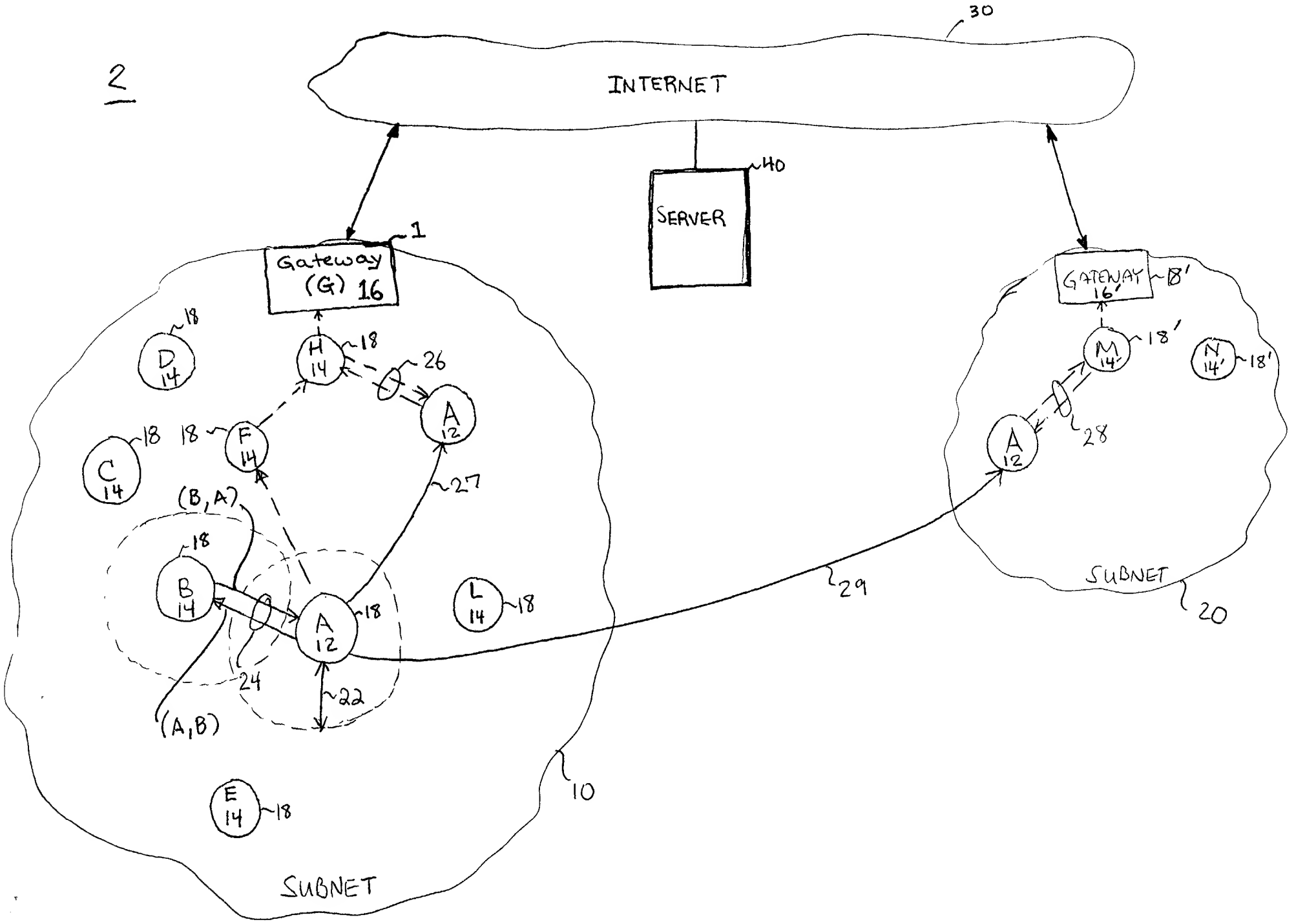

FIG 1

09728 120100

Docket No. 1565.1020-000

50

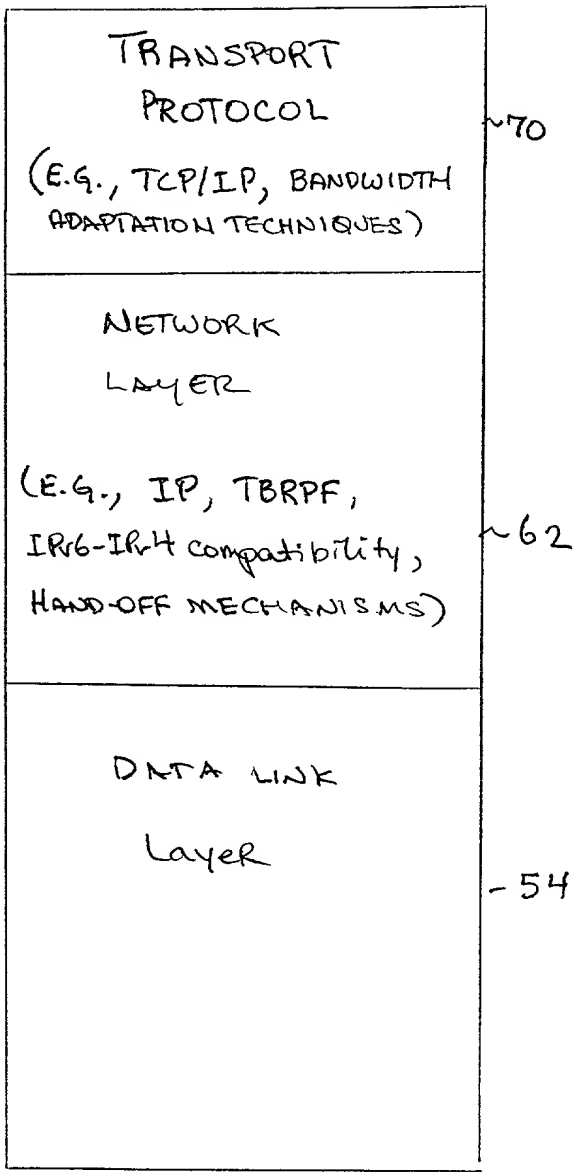

FIG. 2

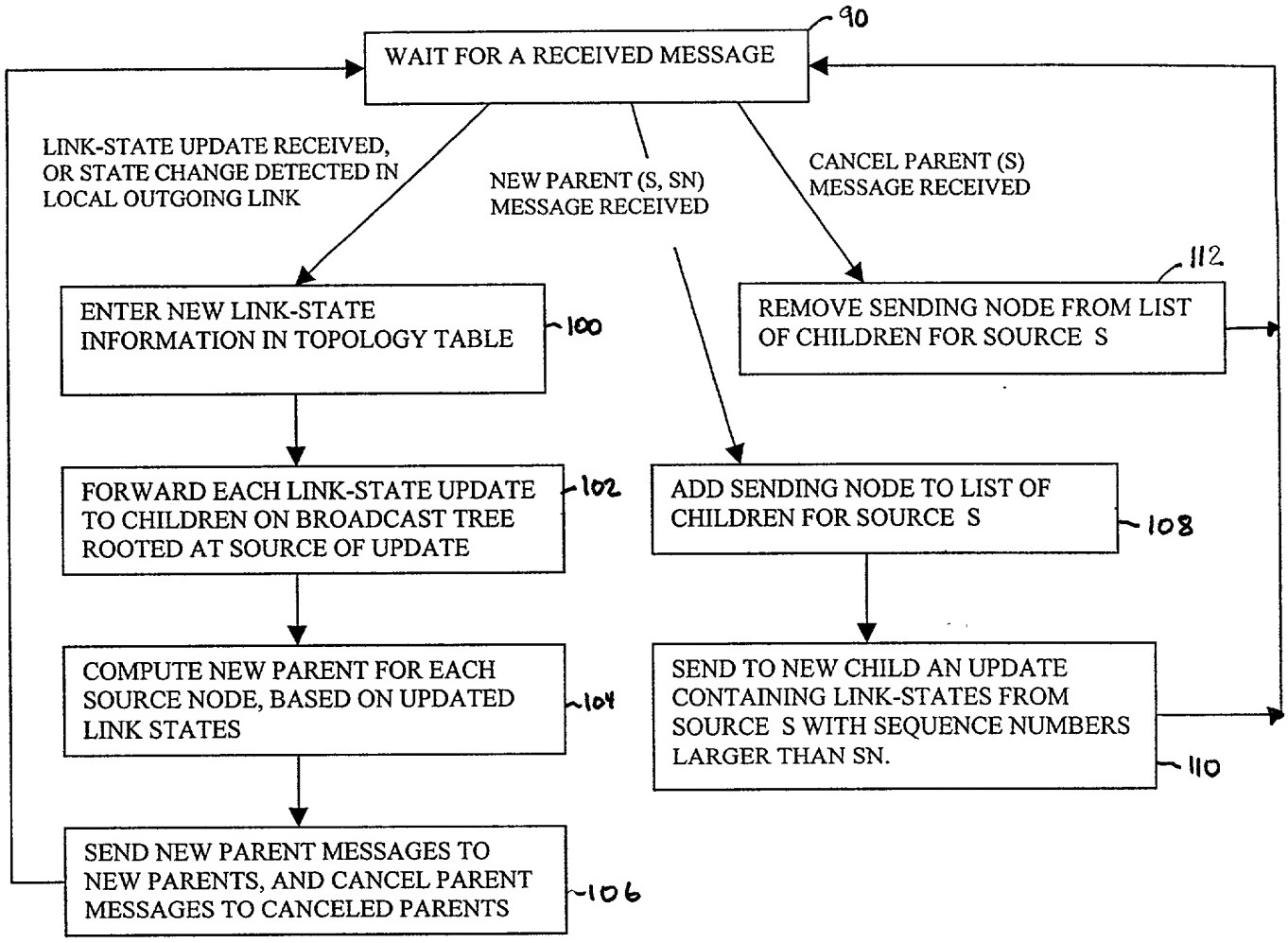

FIGURE 3. TBRPF steps for link-state dissemination (not including neighbor discovery).

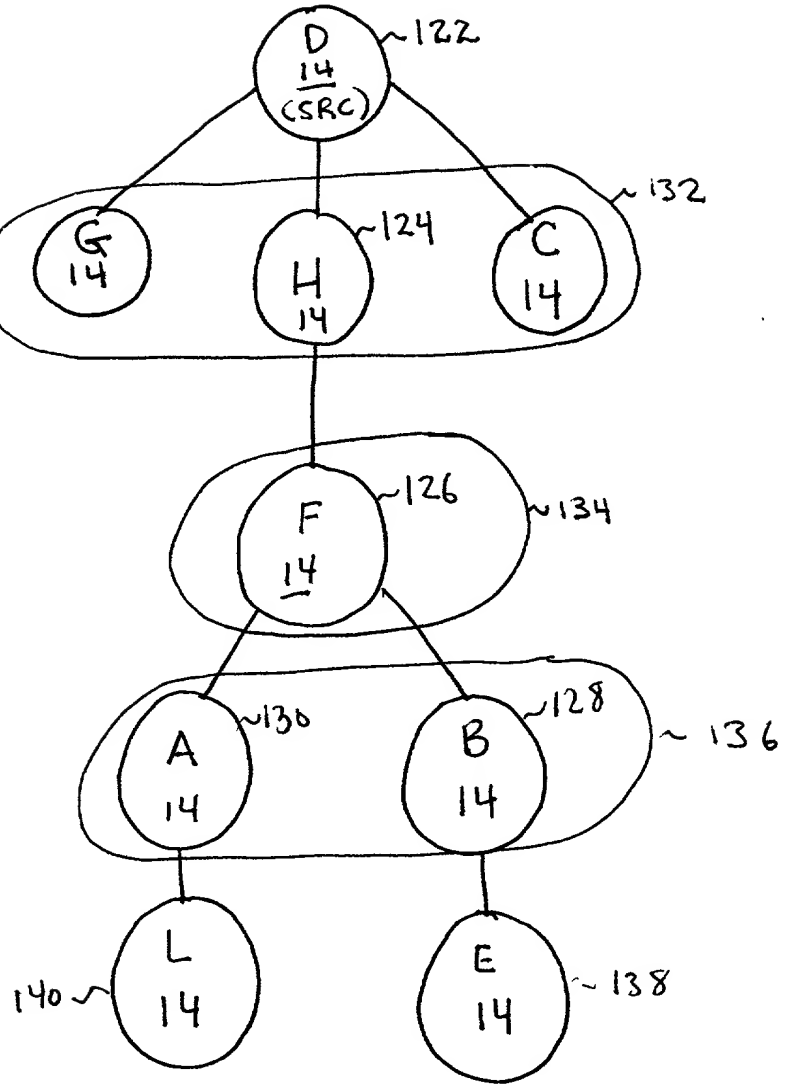
D
14
(SRC)
122
132
G
14
H
14
124
C
14
F
14
126
134
A
14
130
B
14
128
136
L
14
140
E
14
138

FIG. 4

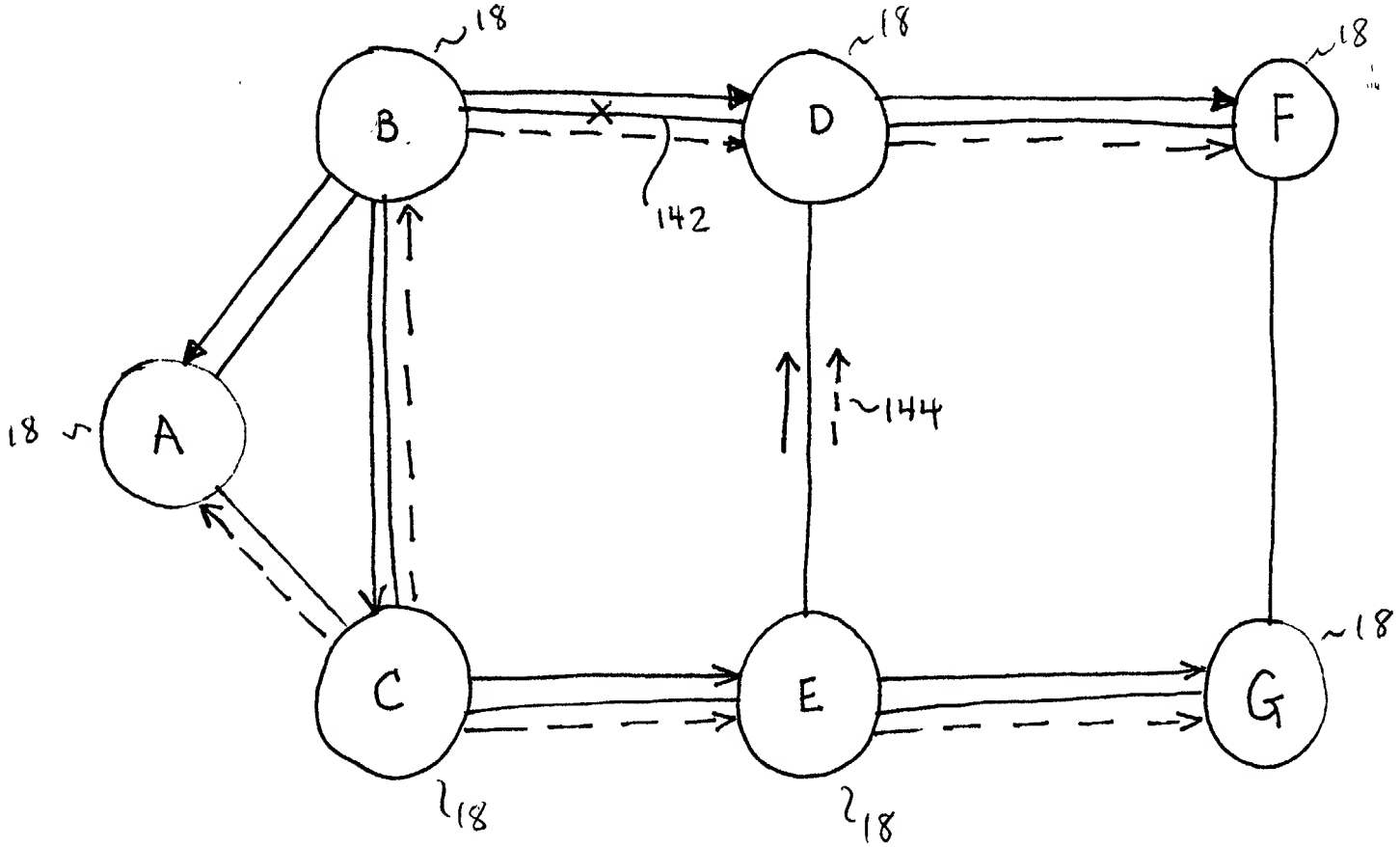

FIG. 5

09728020 . 120100

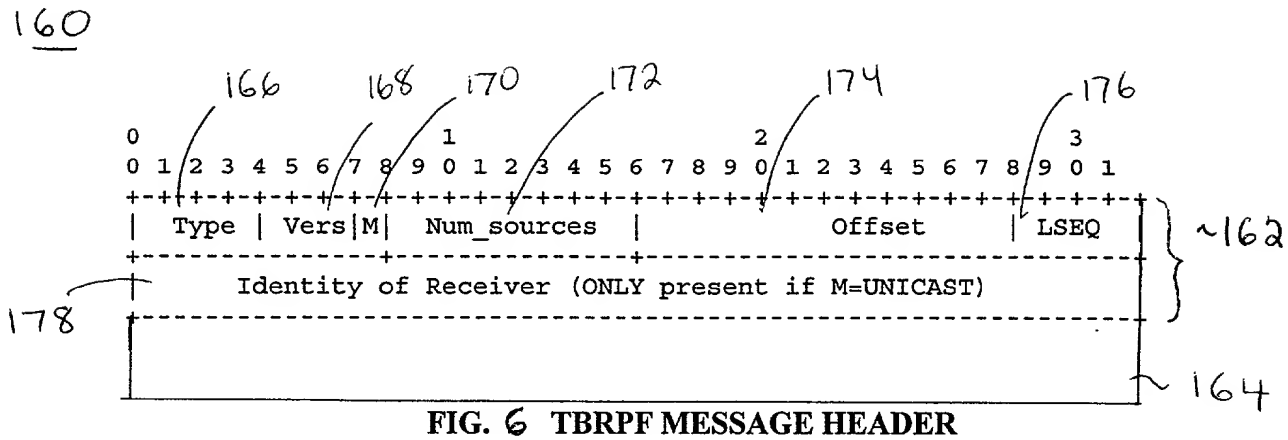

FIG. 6 TBRPF MESSAGE HEADER

Docket: 2002-0568

180

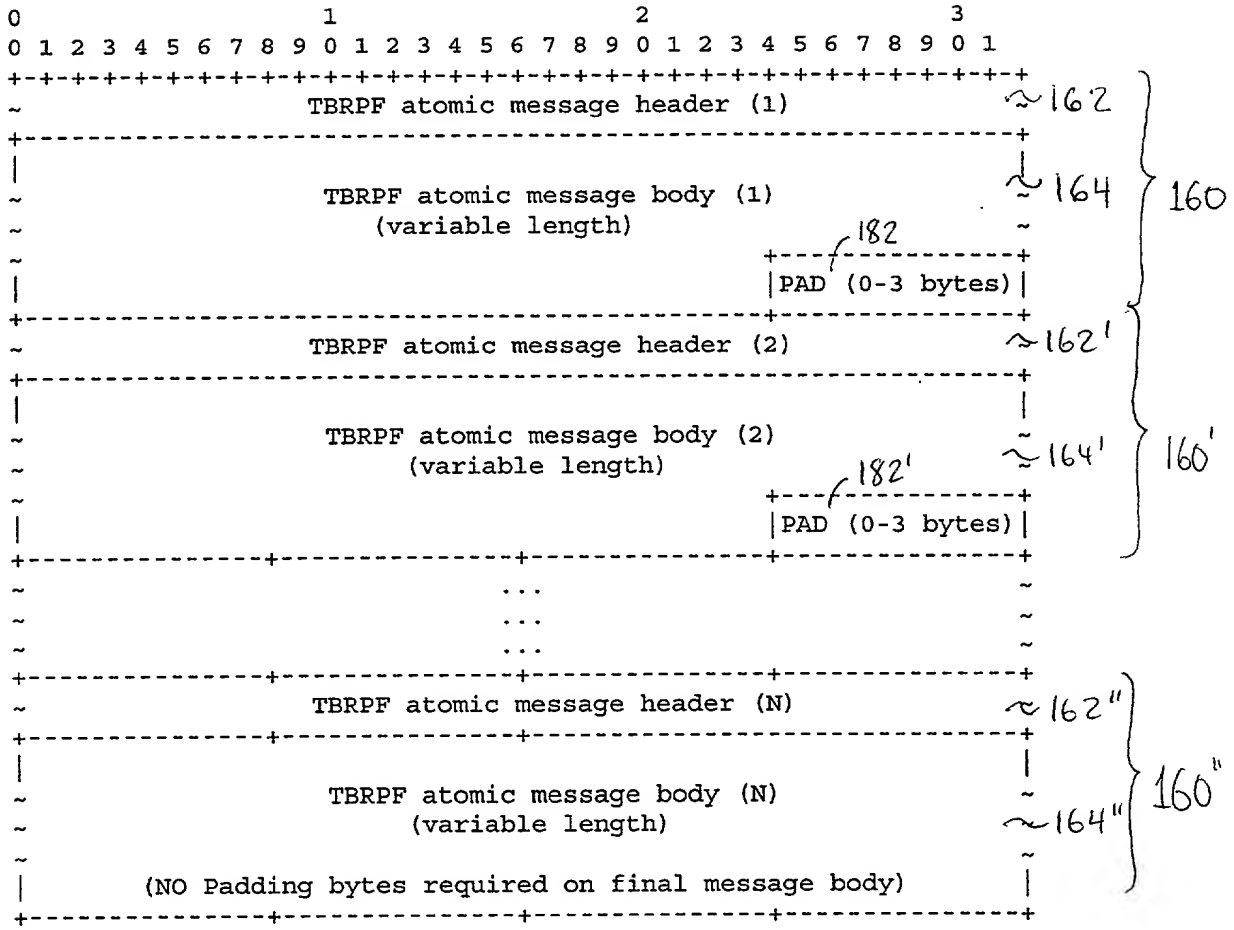

FIG. 7 (A COMPOUND TBRPF MESSAGE)

186

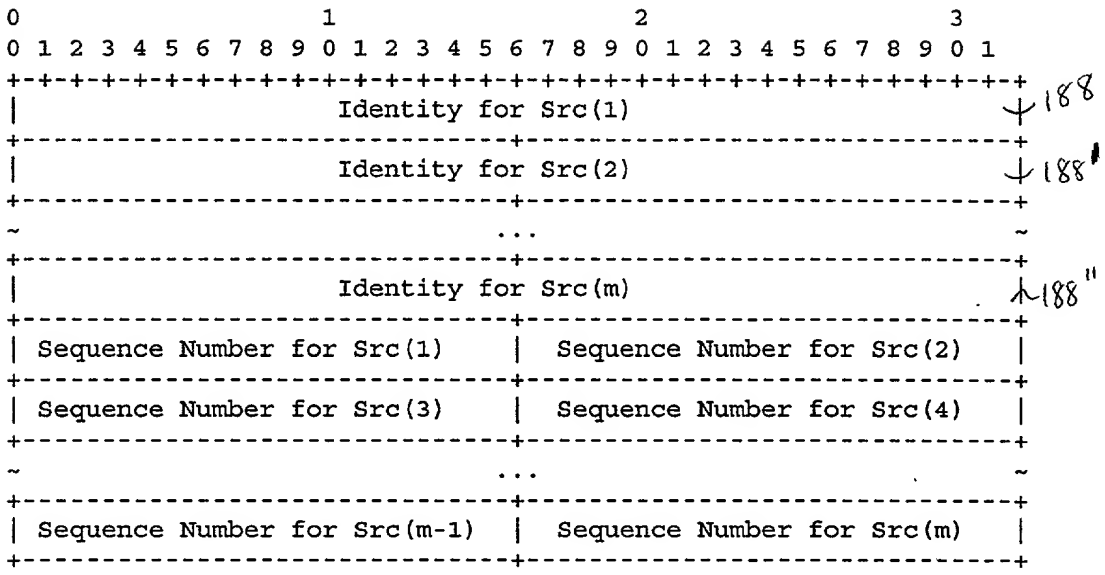

FIG. 8A NEW PARENT MESSAGE

192

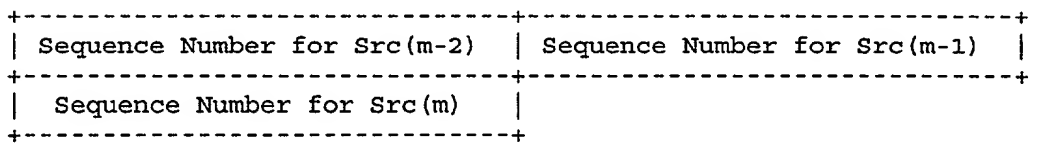

FIG. 8B SHOWS AN ALTERNATIVE ENDING THE NEW PARENT MESSAGE

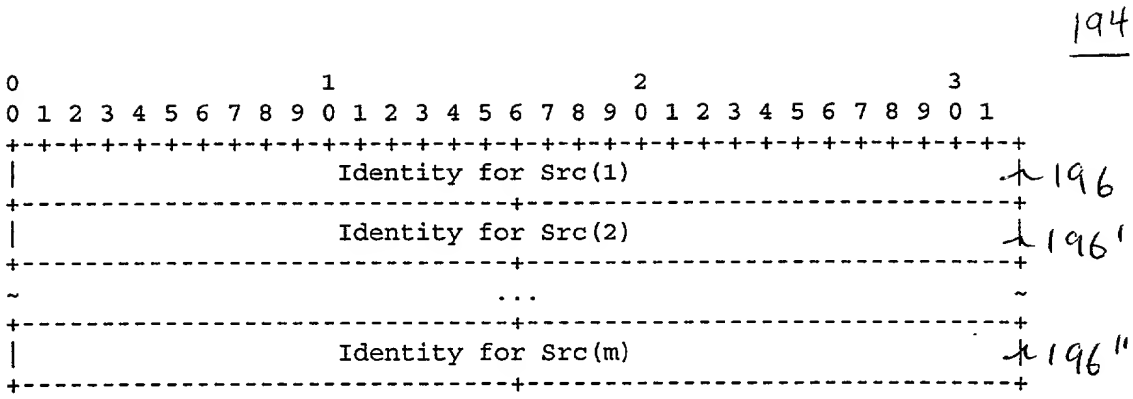

FIG. 9 CANCEL_PARENT MESSAGE

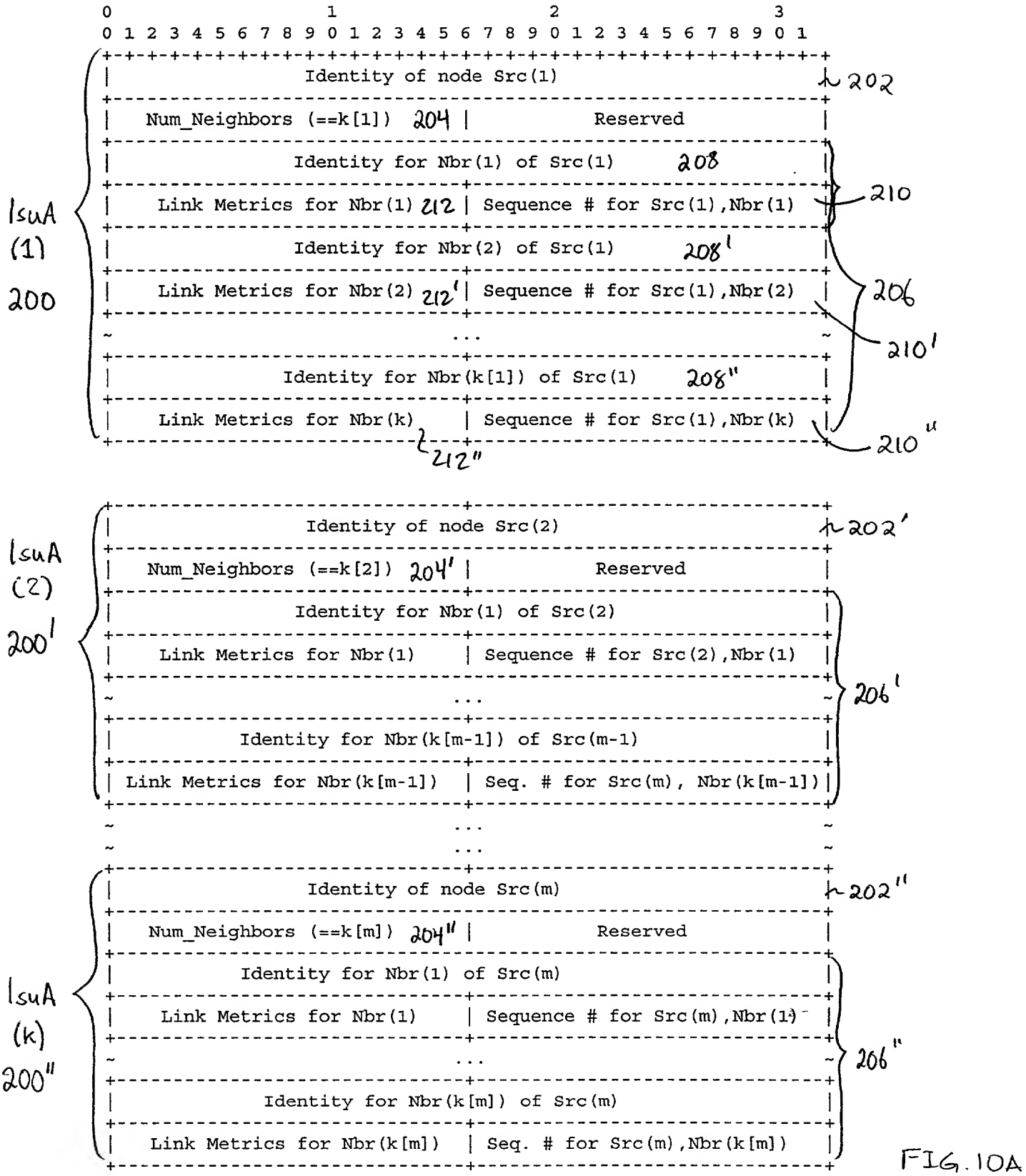
0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
Identity of node Src(1)
202
Num_Neighbors (==k[1])
204
Reserved
Identity for Nbr(1) of Src(1)
208
Link Metrics for Nbr(1)
212
Sequence # for Src(1),Nbr(1)
210
Identity for Nbr(2) of Src(1)
208'
Link Metrics for Nbr(2)
212'
Sequence # for Src(1),Nbr(2)
206
210'
Identity for Nbr(k[1]) of Src(1)
208"
Link Metrics for Nbr(k)
212"
Sequence # for Src(1),Nbr(k)
210"
lsuA (1) 200
Identity of node Src(2)
202'
Num_Neighbors (==k[2])
204'
Reserved
Identity for Nbr(1) of Src(2)
Link Metrics for Nbr(1)
Sequence # for Src(2),Nbr(1)
206'
Identity for Nbr(k[m-1]) of Src(m-1)
Link Metrics for Nbr(k[m-1])
Seq. # for Src(m), Nbr(k[m-1])
lsuA (2) 200'
Identity of node Src(m)
202"
Num_Neighbors (==k[m])
204"
Reserved
Identity for Nbr(1) of Src(m)
Link Metrics for Nbr(1)
Sequence # for Src(m),Nbr(1)
206"
Identity for Nbr(k[m]) of Src(m)
Link Metrics for Nbr(k[m])
Seq. # for Src(m),Nbr(k[m])
lsuA (k) 200"

FIG. 10A

220

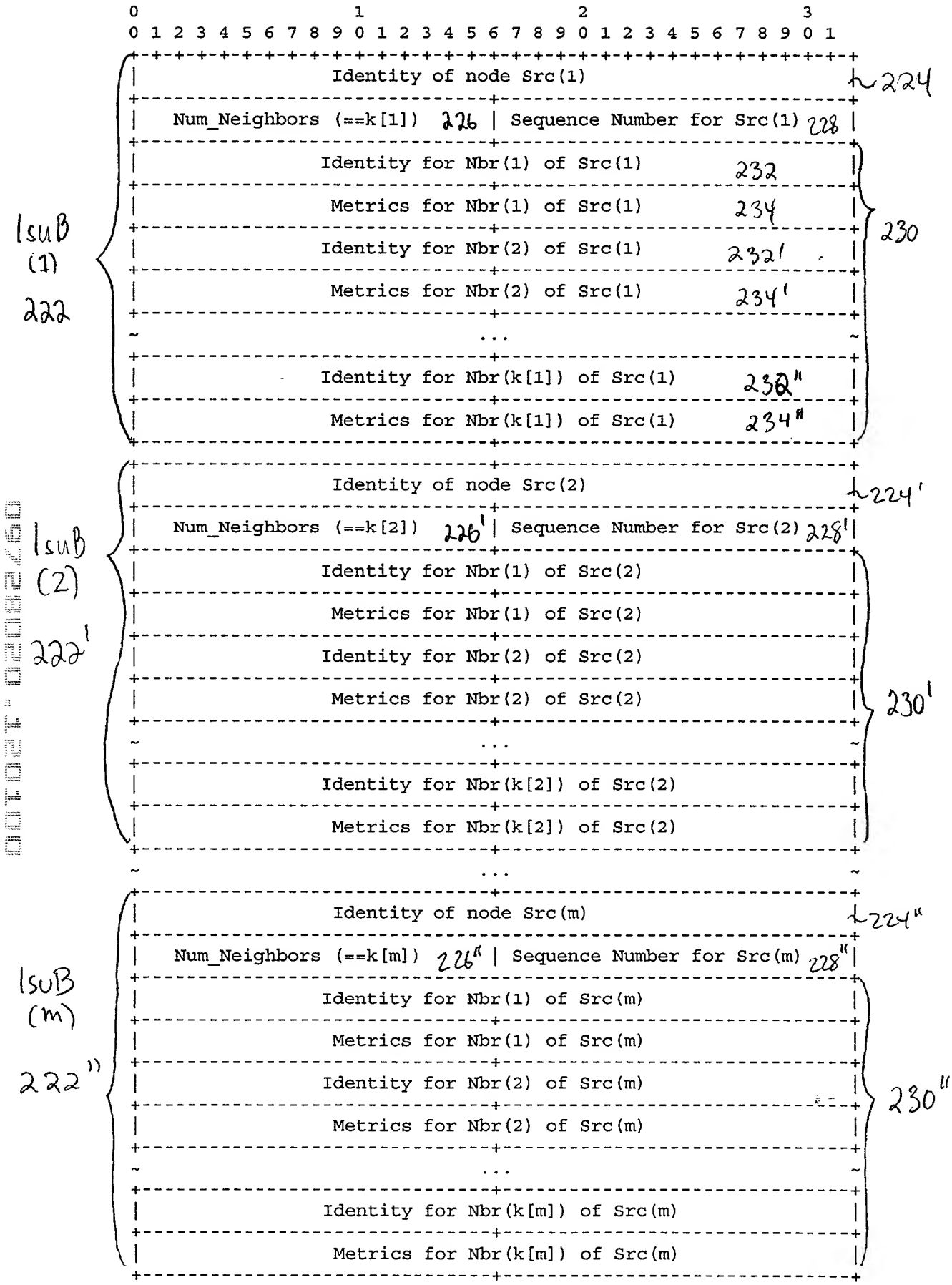
0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
Identity of node Src(1)
224
Num_Neighbors (==k[1]) 226
Sequence Number for Src(1) 228
Identity for Nbr(1) of Src(1) 232
Metrics for Nbr(1) of Src(1) 234
Identity for Nbr(2) of Src(1) 232'
Metrics for Nbr(2) of Src(1) 234'
...
Identity for Nbr(k[1]) of Src(1) 232"
Metrics for Nbr(k[1]) of Src(1) 234"
230
lsuB (1) 222
Identity of node Src(2)
224'
Num_Neighbors (==k[2]) 226'
Sequence Number for Src(2) 228'
Identity for Nbr(1) of Src(2)
Metrics for Nbr(1) of Src(2)
Identity for Nbr(2) of Src(2)
Metrics for Nbr(2) of Src(2)
...
Identity for Nbr(k[2]) of Src(2)
Metrics for Nbr(k[2]) of Src(2)
230'
lsuB (2) 222'
...
Identity of node Src(m)
224"
Num_Neighbors (==k[m]) 226"
Sequence Number for Src(m) 228"
Identity for Nbr(1) of Src(m)
Metrics for Nbr(1) of Src(m)
Identity for Nbr(2) of Src(m)
Metrics for Nbr(2) of Src(m)
...
Identity for Nbr(k[m]) of Src(m)
Metrics for Nbr(k[m]) of Src(m)
230"
lsuB (m) 222"
Docket: 2002-0259

FIG. 10B

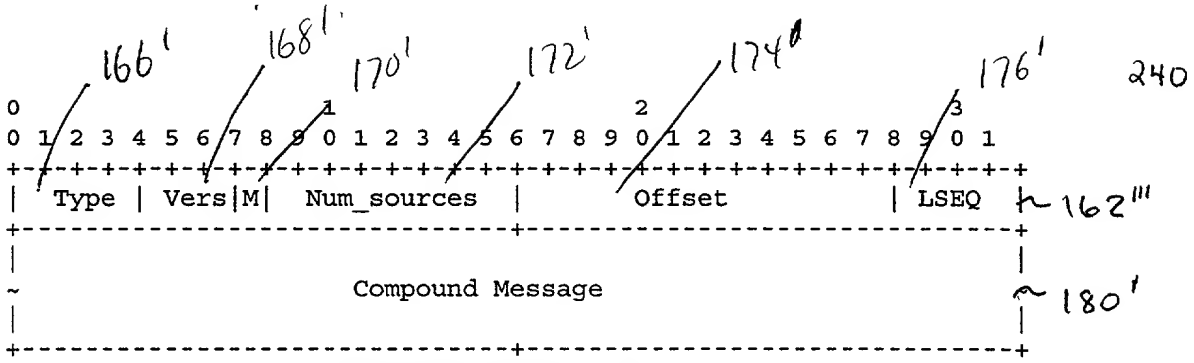

FIG. 11 RETRANSMISSION_OF_BROADCAST message .

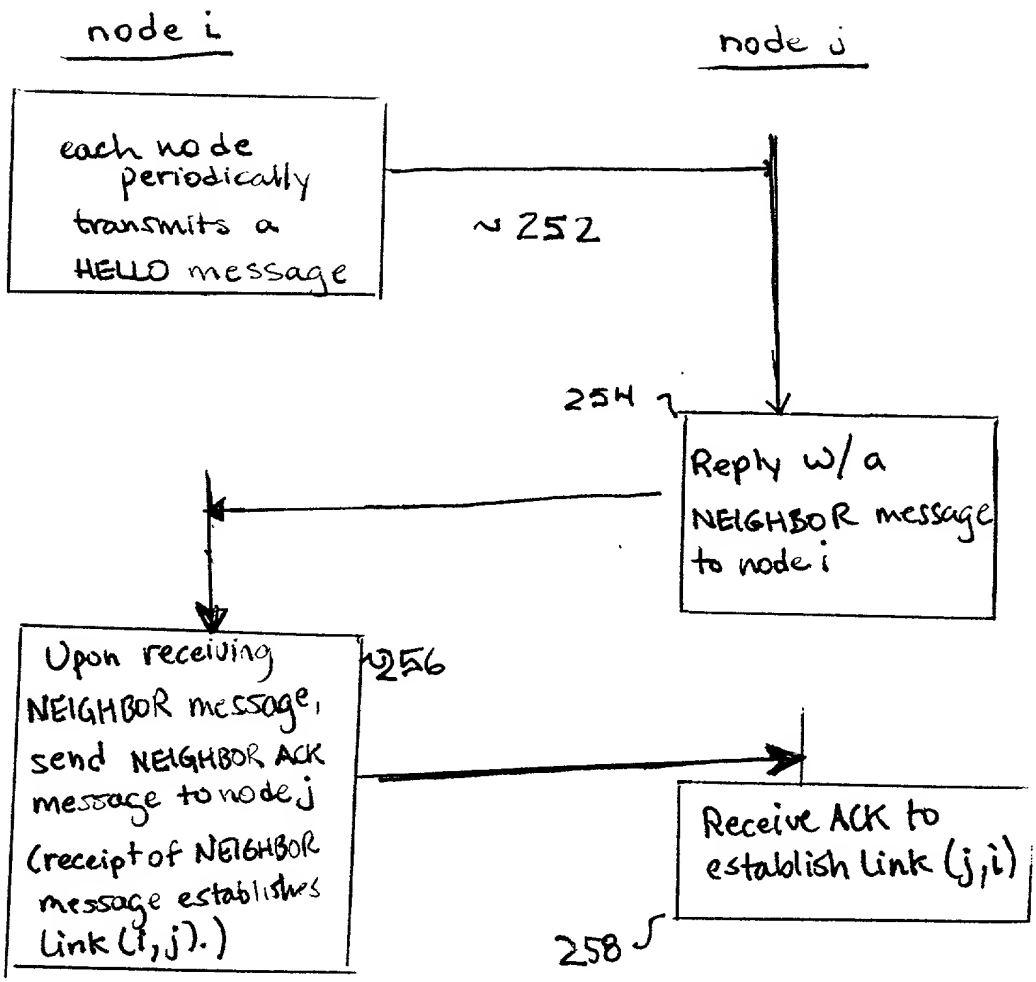
250
node i
node j
each node periodically transmits a HELLO message
~252
254
Reply w/ a NEIGHBOR message to node i
Upon receiving NEIGHBOR message, send NEIGHBOR ACK message to node j (receipt of NEIGHBOR message establishes link (i,j).)
256
Receive ACK to establish link (j,i)
258

FIG. 12

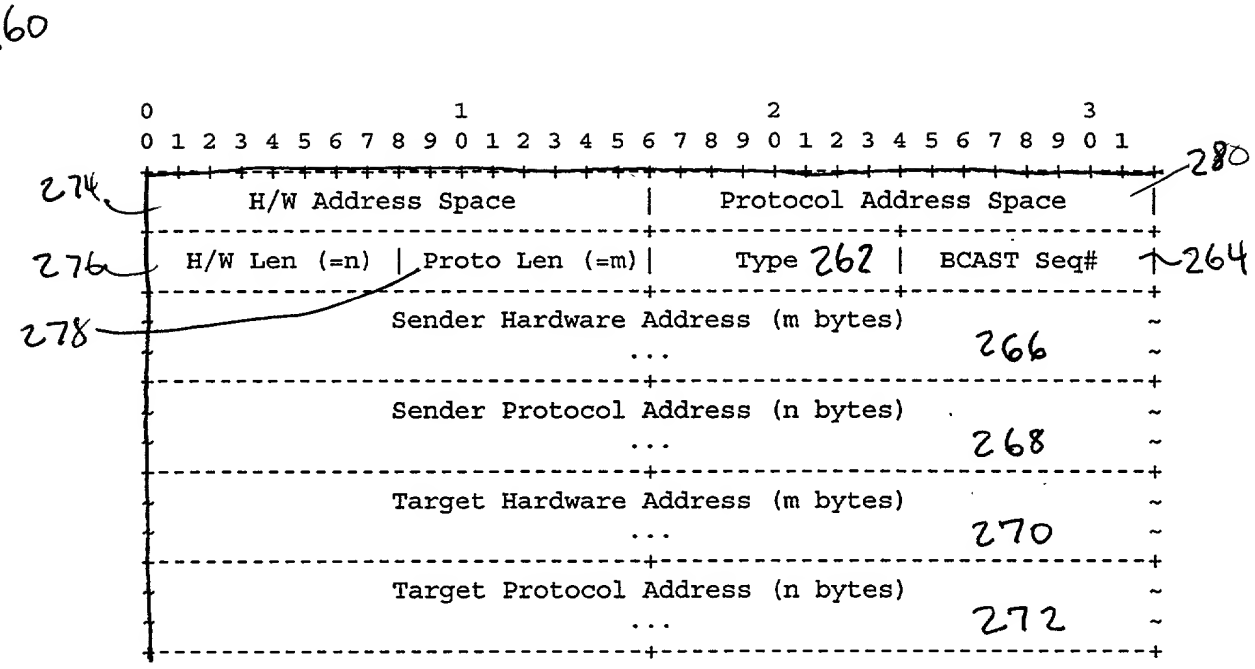
260
0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
274
280
H/W Address Space
Protocol Address Space
276
H/W Len (=n)
Proto Len (=m)
Type 262
BCAST Seq#
264
278
Sender Hardware Address (m bytes)
266
Sender Protocol Address (n bytes)
268
Target Hardware Address (m bytes)
270
Target Protocol Address (n bytes)
272

FIG. 13

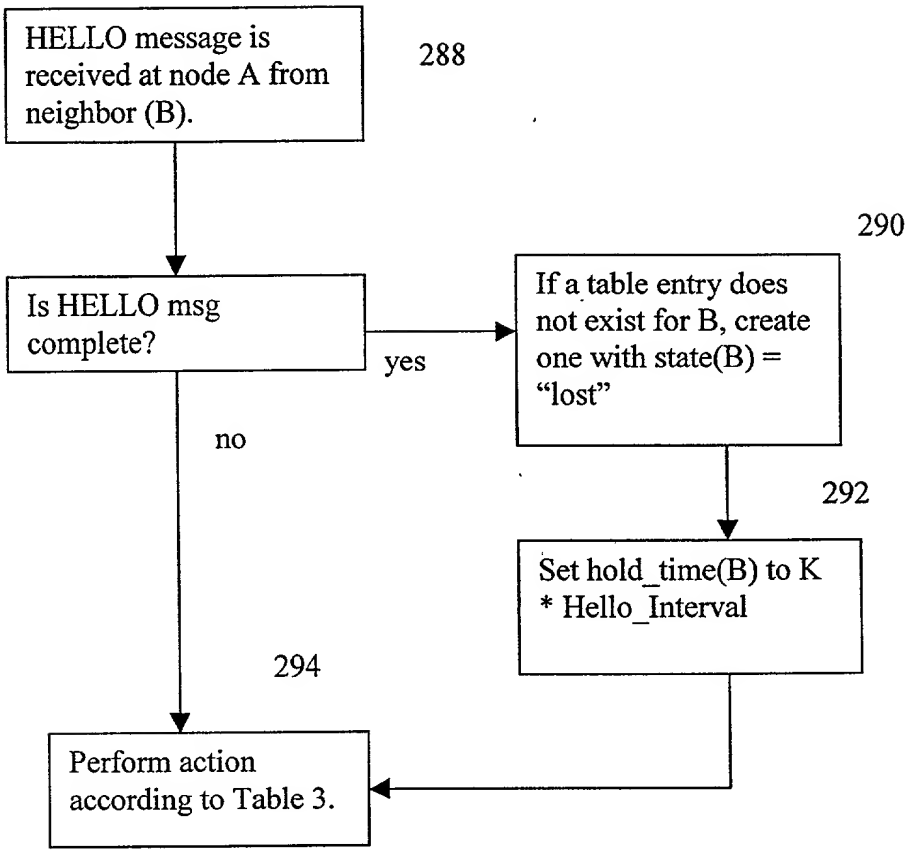
HELLO message is received at node A from neighbor (B).
288
Is HELLO msg complete?
yes
290
If a table entry does not exist for B, create one with state(B) = "lost"
292
Set hold_time(B) to K * Hello_Interval
no
294
Perform action according to Table 3.

FIG. 14

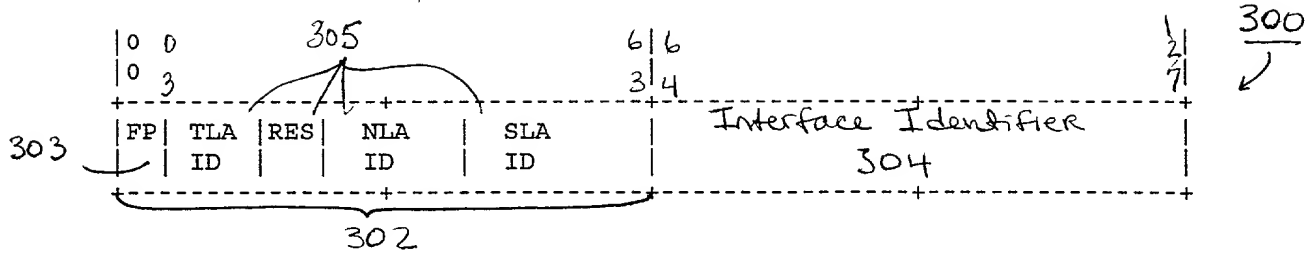

FIG. 15A IPv6-IPv4 Compatibility Address Format

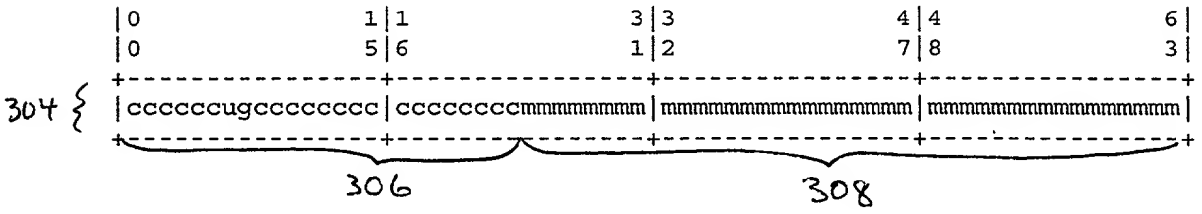

FIG. 15B Interface Identifier format

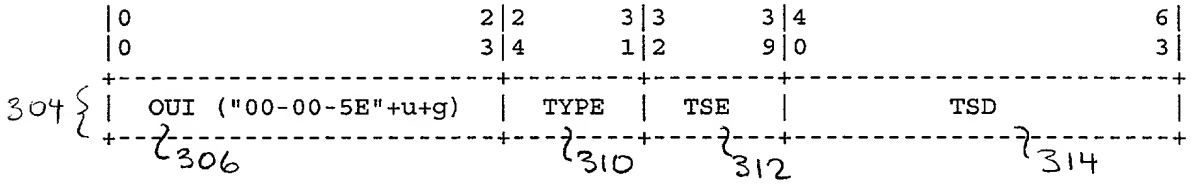

FIG. 15C Interface Identifier format for IANA

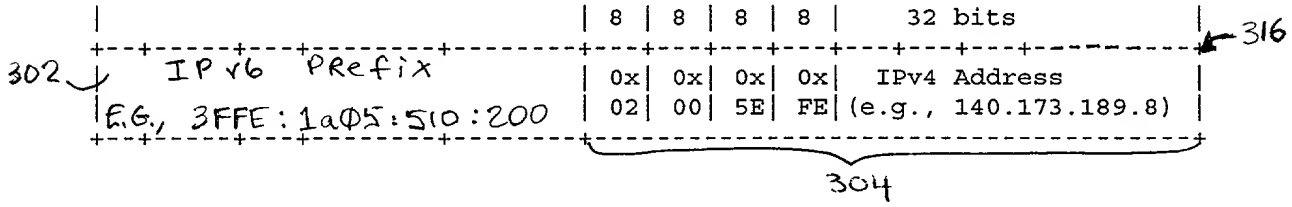

FIG. 15D IPv6-IPv4 Compatibility Address

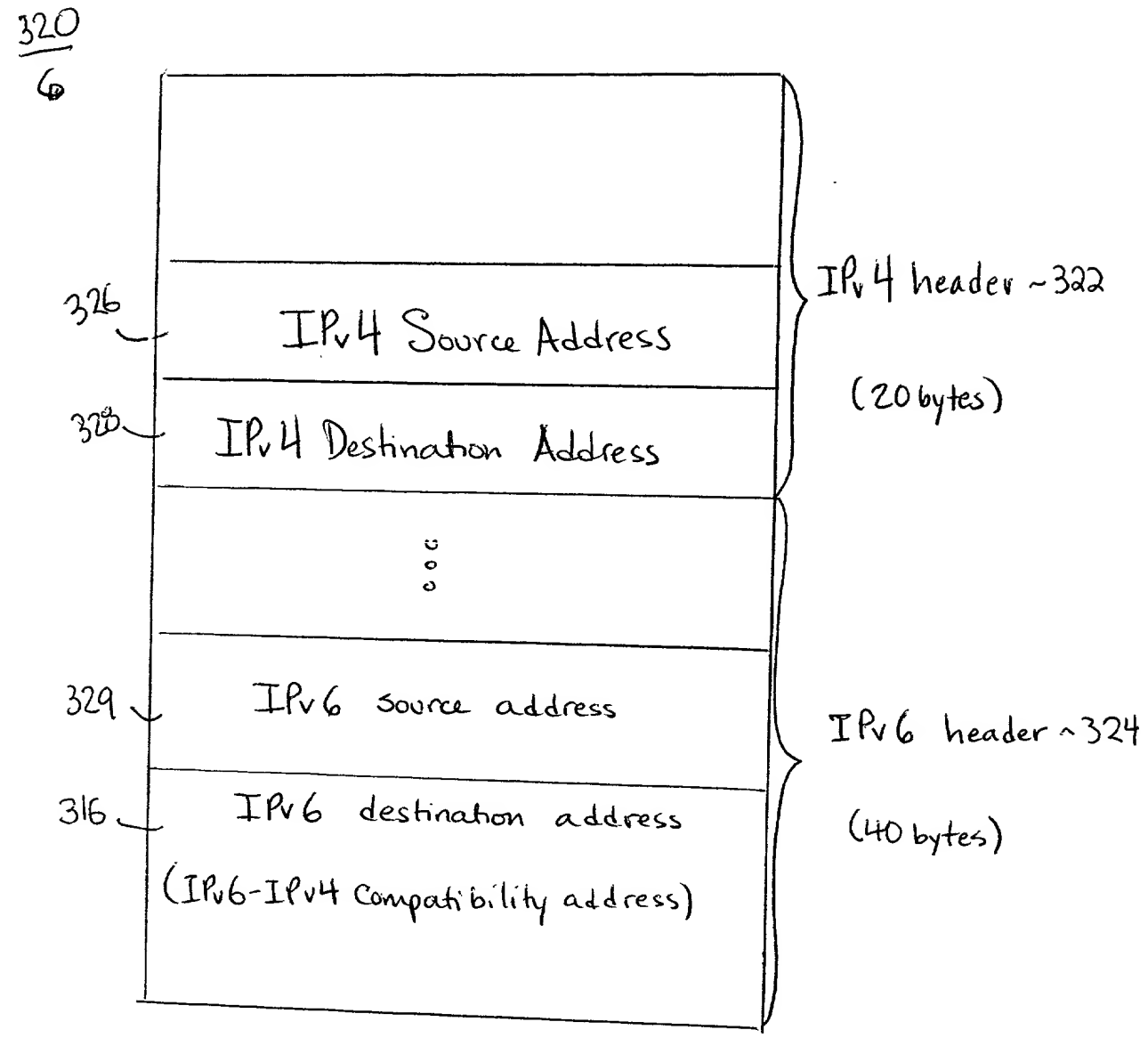
320
6
IPv4 Source Address
326
IPv4 Destination Address
328
329
IPv6 source address
316
IPv6 destination address
(IPv6-IPv4 Compatibility address)
IPv4 header ~322
(20 bytes)
IPv6 header ~324
(40 bytes)

Fig. 15E

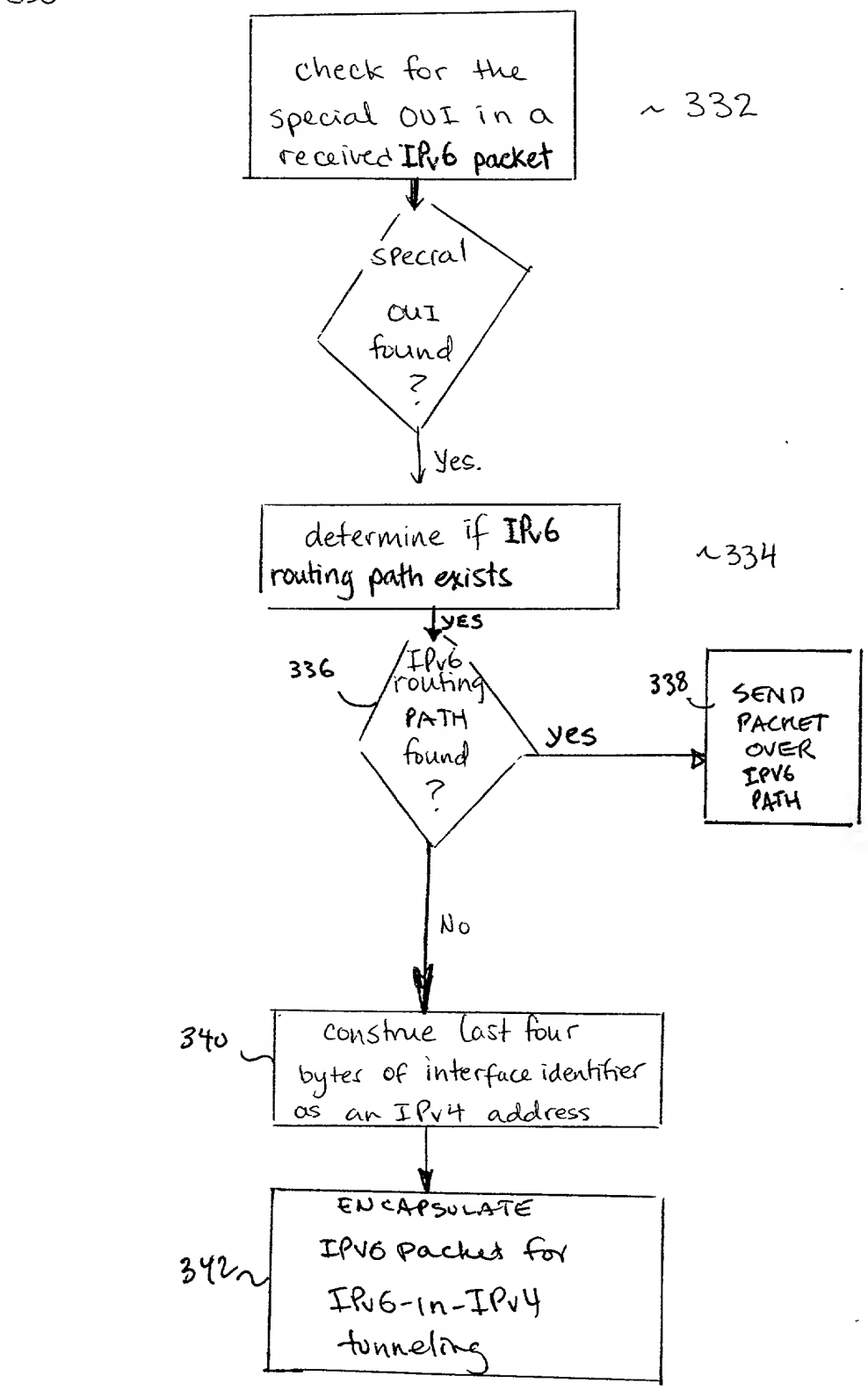
330
check for the special OUI in a received IPv6 packet
332
special OUI found ?
yes.
determine if IPv6 routing path exists
334
YES
336
IPv6 routing PATH found ?
yes
338
SEND PACKET OVER IPV6 PATH
No
340
construe last four byters of interface identifier as an IPv4 address
342
ENCAPSULATE IPV6 Packet for IPv6-in-IPv4 tunneling

FIG. 16

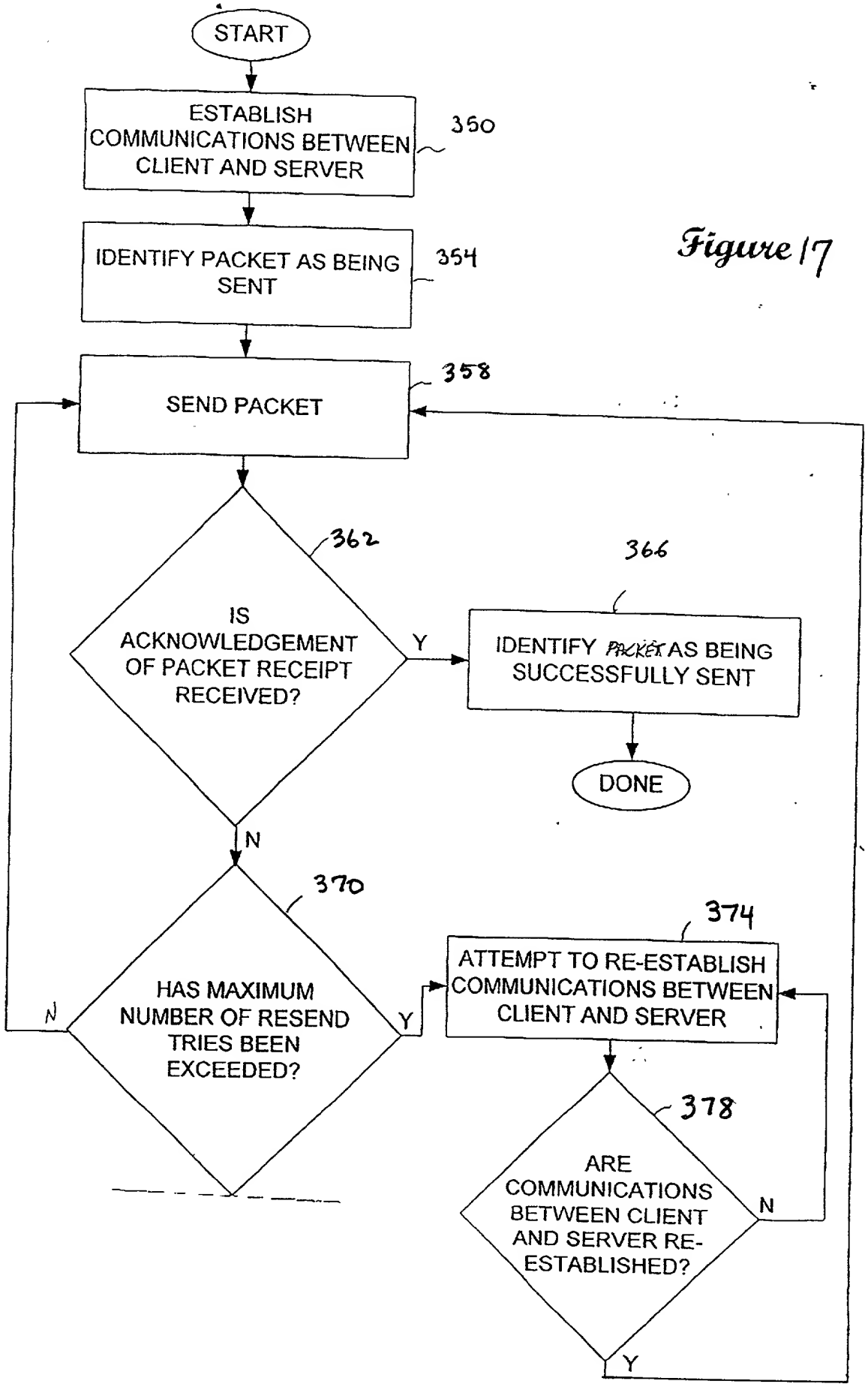
START
ESTABLISH COMMUNICATIONS BETWEEN CLIENT AND SERVER
350
IDENTIFY PACKET AS BEING SENT
354
SEND PACKET
358
IS ACKNOWLEDGEMENT OF PACKET RECEIPT RECEIVED?
362
Y
IDENTIFY PACKET AS BEING SUCCESSFULLY SENT
366
DONE
N
HAS MAXIMUM NUMBER OF RESEND TRIES BEEN EXCEEDED?
370
N
Y
ATTEMPT TO RE-ESTABLISH COMMUNICATIONS BETWEEN CLIENT AND SERVER
374
ARE COMMUNICATIONS BETWEEN CLIENT AND SERVER RE-ESTABLISHED?
378
N
Y

Figure 17

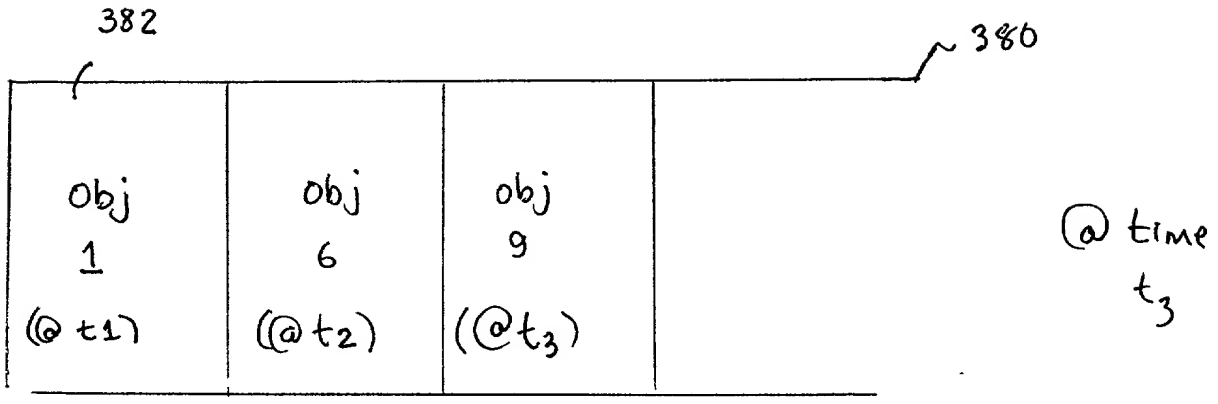

FIG. 18A

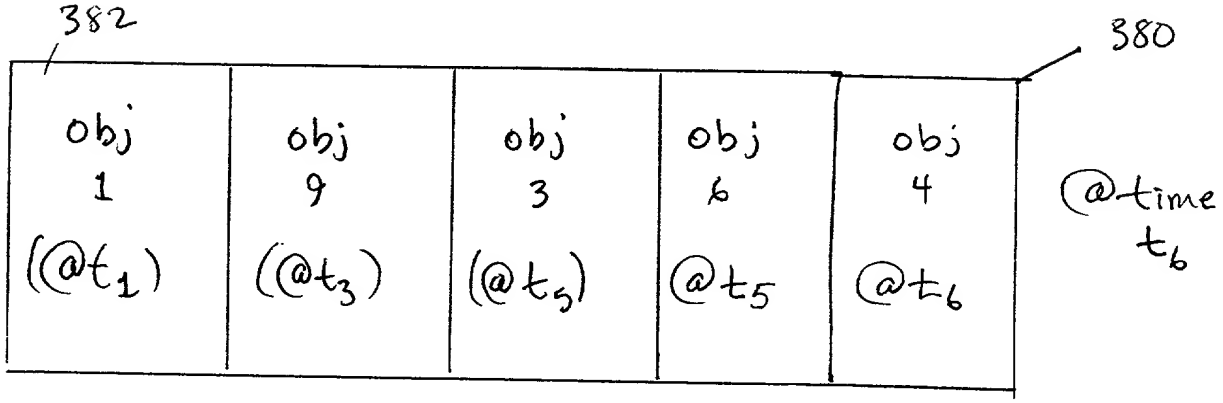

FIG. 18B